

Title (en)

New electrode materials with high surface conductivity

Title (de)

Neuartige Elektrodenmaterialien, die eine erhöhte Oberflächenleitfähigkeit aufweisen

Title (fr)

Matériaux d'électrode présentant une conductivité de surface élevée

Publication

EP 1796189 A3 20070620 (FR)

Application

EP 07004289 A 20000502

Priority

- EP 00401207 A 20000502
- CA 2270771 A 19990430

Abstract (en)

[origin: EP1049182A2] An electrode material, comprising complex oxide particles with a homogeneous conductive carbon-based material coating, is ne An electrode material, comprising a complex oxide of formula $AaMmZzOoNnFf$, in which A = an alkali metal, M = one or more transition metals and optionally a non-transition metal, Z = one or more non-metal and a, m, z, o, n and f are ≥ 0 and are chosen to provide electrical neutrality, has a homogeneous conductive carbon-based material coating to provide a regular electric field distribution at the material grain surfaces. Independent claims are also included for the following: (i) a process for carbon-based material deposition on the above electrode material by pyrolysis of a polymer (mixture), dispersed in the complex oxide, in vacuum or an inert gas atmosphere; (ii) a process for carbon-based materia deposition on the above electrode material by dismutation of carbon-based material monoxide, optionally mixed with an inert gas, below 900 degrees C optionally in the presence of a catalyst; (iii) a process for preparing the above electrode material by pyrolysis of an organic derivative of an alkali metal (A) to form a carbon-based material deposit on the complex oxide surface a to supply a portion of the alkali metal content of the complex oxide; and (iv) an electrochemical cell having one or more electr of the above electrode material.

IPC 8 full level

H01M 4/131 (2010.01); **B05D 5/12** (2006.01); **C01B 31/02** (2006.01); **H01B 1/00** (2006.01); **H01B 1/08** (2006.01); **H01G 9/00** (2006.01); **H01G 11/46** (2013.01); **H01M 4/04** (2006.01); **H01M 4/06** (2006.01); **H01M 4/08** (2006.01); **H01M 4/136** (2010.01); **H01M 4/1391** (2010.01); **H01M 4/36** (2006.01); **H01M 4/48** (2010.01); **H01M 4/485** (2010.01); **H01M 4/50** (2010.01); **H01M 4/52** (2010.01); **H01M 4/58** (2010.01); **H01M 4/583** (2010.01); **H01M 4/62** (2006.01); **H01M 6/16** (2006.01); **H01M 6/18** (2006.01); **H01M 10/05** (2010.01); **H01M 10/0565** (2010.01); **H01M 10/0566** (2010.01); **H01M 10/052** (2010.01); **H01M 10/36** (2010.01)

CPC (source: EP US)

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